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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,619	08/01/2001	Christian Criegee	P 281519 / 000319 OC	2502

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EXAMINER
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GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/919,619	<b>Applicant(s)</b> CRIGEE ET AL.	
	<b>Examiner</b> Jill M. Gray	<b>Art Unit</b> 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I, cellulose fibers in Paper No. 10 is acknowledged. The traversal is on the ground(s) that cellulose articles contain cellulose fibers, i.e., the combination requires all of the features of the subcombination. This is not found persuasive because the combination of "cellulose articles" would encompass a multiplicity of articles and thus combinations, such as paper, fiberboard or diapers, all of which do not necessarily require finished cellulosic fibers for novelty. Moreover, the subcombination (cellulose fibers) has separate utility by itself and in a host of combinations which are not related to one another.

The requirement is still deemed proper and is therefore made FINAL.

### ***Response to Amendment***

The rejection of claims 1-17 under 35 U.S.C. 103(a) as being unpatentable over Haller et al, 1,886,480 is withdrawn upon further consideration by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haller et al, 1,886,480 (Haller) in view of "Flame Retardant Cellulose" Sello, et al, (herein after Sello).

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Haller teaches cellulose fibers containing said fibers wherein said fibers have been treated with a compound having a similar chemical backbone structure as that contemplated by applicants in claims 1 and 9. See page 1 of Haller. In addition, Haller teaches that the cellulose is cotton and can be in the form of a yarn as required by claims 3 and 11. Regarding claims 2, 4-9 and 12-13, because Haller teaches the same chemical backbone structure, it is the examiner's position that all derivatives thereof would have been obvious to one of ordinary skill in the art at the time the invention was made. In addition, Haller teaches treating the cellulose under alkaline conditions and treating with a cyanuric chloride derivative as required by claim 1. As to the degree of substitution, it is the examiner's position that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. Haller is silent as to the incorporation of phosphorus-containing compound.

Sello teaches flame retardant cellulose comprising triazine derivatives having the same chemical backbone structure as Haller and applicants', said triazine derivative being modified with a phosphorus-containing compound.

Treating cellulose fibers with a cyanuric chloride is old and known in the art as seen by the teachings of Haller and Sello. Accordingly, it would have been obvious to the skilled artisan to form cellulose fibers treated with a cyanuric chloride derivative having the same chemical backbone structure as that contemplated by applicants. As to properties such as the LOI and flame retardancy, it is the examiner's position that since the cyanuric chloride has the same chemical backbone structure as applicants,

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properties such as the LOI and flame retardancy are inherent. Regarding claims 7 and 8, Sello teaches triazine derivatives containing phosphonate substituents have been synthesized and evaluated as flame-retardants for cellulosic fabrics. It would have been obvious to modify the cyanuric chloride derivatives of Haller by including a phosphorus containing compound as taught by Sello, with the reasonable expectation of providing the optimum combination of structural elements for attaining flame retardant effectiveness.

As a result, the combined teachings of Haller and Sello would have provided a suggestion for the cellulose fiber and method of making as claimed in the present claims.

Claims 1-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheibli et al, 6,036,731 (Scheibli) in view of "Flame Retardant Cellulose", Sello et al, (Sello, as applied above).

Scheibli teaches cellulose fibers having amino-s-triazine compounds bound thereto, said compounds being of the type contemplated by applicants in claims 1, 2, and 9 (see columns 4 and 5) wherein the cellulose is cotton or viscose fiber as required by claim 3. See column 13, lines 5-10. In addition, Scheibli teaches a method comprising treating the cellulose fibers under alkaline conditions and treating with a cyanuric chloride derivative. See column 15, lines 14-30. The compound is used in amounts within applicants' ranges as set forth in claims 4-6, 12-13, and 15. See column 14, lines 62-65 and column 16, lines 1-4. The fiber can be in the form of a yarn as required by claims 3 and 11. Note column 13, line 14. Regarding claims 16 and 17,

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Scheibli teaches cellulosic fibers treated with a cyanuric chloride compound of the same type set forth by applicants, accordingly, all properties including flame retardancy and LOI are inherent. As to the degree of substitution, it is the examiner's position that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. Regarding claims 7-8 and 14, Scheibli is silent as to the inclusion of a phosphorus-containing compound. Sello is as set forth above and teaches flame retardant cellulose comprising triazine derivatives containing phosphonate substituents, wherein the triazine derivatives have the same chemical backbone structure as that taught by applicants and Scheibli. It would have been obvious to modify the compounds of Scheibli by including a phosphorus containing compound as taught by Sello, with the reasonable expectation of providing the optimum combination of structural elements for attaining flame retardant effectiveness.

Therefore, the combined teachings of Scheibli and Sello would have provided a suggestion to the skilled artisan for the cellulose fiber and method of making as claimed in the present claims.

### ***Response to Arguments***

Applicant's arguments filed March 17, 2003 have been fully considered but they are not persuasive.

Applicants argue that there is no motivation in Haller to flameproof cellulose by reaction with cyanuric chloride and that Haller does not teach or suggest a method for

flameproofing of cellulose or that treatment of cellulose with cyanuric chloride imparts flameproofing characteristics.

In this concern, it is the position of the examiner that the property of flameproofing is necessarily a property resulting from the reaction with cyanuric chloride. The fact that Haller is silent to the property does not provide evidence of its absence. The same compounds necessarily would have the same properties, and there is no clear factual evidence on this record that the cellulose fibers reacted with cyanuric chloride compounds taught by Haller do not have this property.

Applicants argue that mere cyanuric chloride treated cellulose does not have inherent flame retardant properties and that the successful use of triazine derivatives in the flameproof finishing of cellulosic material is the achievement of a high degree of substitution. Applicants further argue that Haller provides no teaching, suggestion, or motivation for one skilled in the art to modify his dyeing intermediates to flameproof cellulose articles.

In response thereto, there is no factual evidence of record that cyanuric chloride treated cellulose does not have inherent flame retardant properties, nor is there clear factual evidence of record that said properties are directly related to the degree of substitution. Agreeably Haller teaches dyestuffs having the claimed critical compound. Nonetheless, the same compound necessarily has the same properties and there is no clear evidence on this record that the compounds of Haller do not have flame retardant properties.

Applicants have not clearly identified that which they regard as their invention.

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No claims are allowed.


**Conclusion**

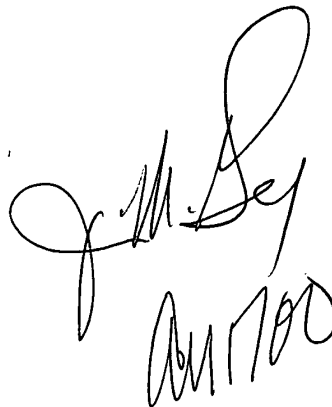
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 703.308.2381. The examiner can normally be reached on M-F 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703.308.0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0651.

  
June 15, 2003

  
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